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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,505	08/01/2001	Vincenzo Sestito	Q65587	3295

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EXAMINER

MURPHY, RHONDA L

ART UNIT PAPER NUMBER

2667

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,505

Applicant(s)

SESTITO ET AL.

Examiner

Rhonda Murphy

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8 and 10-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8 and 10-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the amendment filed on July 15, 2005. Accordingly, claims 2 and 9 have been canceled and claims 1, 3-8 and 10-16 are currently pending in this application.

Claim Objections

1. Claim 8 is objected to because of the following minor informality: In the fourth line of claim 8, "element" shall be replaced by "elements". Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3 - 8 and 10 - 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usuba et al. (US 6,614,754) in view of Ikeda et al. (US 6,144,633).

Regarding claim 1, Usuba teaches a method of re-routing a path installed in a transoceanic Multiplex Section Shared Protection Ring (MS-SPRing) network in the event of a first failure on a first span of said path (col. 1, lines 33-37; a BLSR network in SONET is equivalent to MS-SPRing in SDH), said network comprising network elements connected in a ring configuration by fiber spans (Fig. 3), said fiber spans

comprising high priority channels and low priority channels (working and protection lines; col. 5, lines 54-59); said method comprising performing a ring switch action by a Multiplex Section Shared Protection mechanism (col. 5, lines 24-27; BLSR); providing said ring with a Time Slot Interchange mechanism (col. 48-59); and re-routing the path over a time slot of the low-priority channels corresponding to a time slot of the high-priority channels of the first span having the first failure (col. 5, lines 60-67; col. 6, lines 1-5).

As stated above, Usuba teaches re-routing over a time slot of low priority channels corresponding to the high priority channels. However, Usuba fails to explicitly disclose a second span of the path becoming affected by a second failure and releasing the re-routing performed because of the first failure on the first span.

However, Ikeda teaches a second span of the path becoming affected by a second failure (Fig. 34; col. 5, lines 7-16), further comprising: releasing the re-routing performed because of the first failure on the first span (col. 5, lines 18-20); and selecting one of the first and second spans (col. 5, lines 29-31).

In view of this, it would have been obvious to one skilled in the art to modify Usuba's method by incorporating a second span failure, so as to provide a method the further supports additional span failures.

Regarding claim 3, Usuba teaches a method of re-routing in the event of a failure.

Usuba fails to explicitly disclose maintaining re-routing wherein a second span becomes affected by a second failure.

However, Ikeda teaches a second span becoming affected by a second failure (Fig. 34, col. 5, lines 7-9), further comprising maintaining the re-routing performed because of the first failure on the first span, when persistency of re-routing information is supported by the network elements of the ring network (col. 5, lines 20-22).

In view of this, it would have been obvious to one skilled in the art to modify Usuba's method by maintaining the re-routing performed in the first failure, when a second span is affected by failure, so as to continue the re-routing of the first failed span and ensure information is appropriately transmitted to the termination node.

Regarding claim 4, the combined method of Usuba and Ikeda, as described above in the rejection of claim 1, teach selecting one of the first or second spans and one further span of the installed path becoming affected by an additional failure.

Usuba further teaches identifying nodes terminating the path to be protected (col. 12, lines 34-37); identifying switching nodes (col. 12, lines 34-37); and considering two spans adjacent to switching nodes able to communicate with termination nodes of the path to be protected (col. 12, lines 37-47).

Regarding claim 5, the combined method of Usuba and Ikeda teach selecting one of the first or second spans. Usuba further teaches providing each network node with a node identification ID (col. 1, lines 47-48); identifying at least one switching node (col. 12, lines 34-41); and selecting the first or second span adjacent to a switching node having a higher or a lower node identification ID (col. 12, lines 39-41).

Regarding claim 6, the combined method of Usuba and Ikeda teach selecting one of the first or second spans. Usuba further teaches providing a network ring map (col. 4,

lines 20-26; ring topology map); identifying switching nodes (col. 4, lines 21-22); and selecting the first or second span adjacent to the switching node that comes first or last in the network ring map (col. 4, lines 20-26).

Regarding claim 7, the combined method of Usuba and Ikeda teach selecting one of the first or second spans. Usuba further teaches identifying a west and an east side in the ring network (col. 4, lines 36-39); identifying at least one switching node (col. 1, lines 47-48); and selecting the first or second span adjacent to a switching node in the ring network (col. 4, lines 20-26).

Although Usuba teaches selecting a span adjacent to a switching node, Usuba fails to explicitly disclose selecting a span adjacent to a far west or far east switching node.

However, it would have been obvious to one skilled in the art to select a far west or far east switching node, since switching nodes contain east and west sides and the span selected will thus relate to an east or west side of that particular node.

Regarding claim 8, Usuba and Ikeda teach the same limitations described above in the rejection of claim 1. Usuba further teaches network element (Fig. 3, node) comprising means for performing ring switch actions upon receipt of a corresponding signal, wherein said ring switch actions comprise a pass-through action, a bridge action or a switch action (col. 3, lines 32-37); and means for issuing and sending proper signals upon receipt of corresponding signals (col. 3, lines 29-37), wherein a path is installed in said ring network (Fig. 3).

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Regarding claim 10, Usuba teaches the same limitations described in the rejection of claim 3.

Regarding claim 11, Usuba further teaches a network element wherein the path to be protected comprises termination nodes, switching nodes identified because of a failure (Figs.3 and 4; col. 3, lines 25-37) and wherein said means for selecting one of the first or second spans having a failure comprise means for considering two spans adjacent to the switching nodes able to communicate with the termination nodes of the path to be protected in the case where at least one further span of the path becomes affected by a failure (col. 12, lines 37-55).

Regarding claim 12, Usuba further teaches a path termination node (col. 4, lines 15-17); means for performing a Bridge & Switch action upon receipt of two signals comprising corresponding bridge requests with a Bridge & Switch status code related to different spans (col. 2, lines 43-50; col. 3, lines 26-36).

Regarding claim 13, Usuba further teaches a path non-termination node (Fig. 6; col. 3, lines 54-58); and means for performing a pass-through action upon receipt of at least one signaling comprising a bridge request with a Bridge & Switch status code (col. 2, lines 43-50; col. 3, lines 26-36).

Regarding claim 14, Usuba further teaches a path termination node; and means for performing a Bridge & Switch action upon receipt of two signals comprising corresponding bridge requests with Idle status code related to the same span (col. 2, lines 43-50; col. 3, lines 26-36).

Regarding claim 15, Usuba further teaches a path non-termination node; and means for performing a pass-through action upon receipt of at least one signaling comprising a bridge request with Idle status code (col. 2, lines 43-50; col. 3, lines 26-36).

Regarding claim 16, Usuba teaches the same limitations described in the rejection of claim 8.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Tokura et al. (US 5,469,428) discloses a loop-back system in a dual ring network.

*Gullicksen et al (US 6,751,189) discloses virtual line switched ring (VLSR) connection state distribution scheme.

*Sharma et al. (US 6,839,514) discloses a method and apparatus for operation, protection, and restoration of heterogeneous optical communication networks.

*Shiodat et al. (US 5,537,393) discloses BLSR network having path-ais generation function.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda Murphy
Examiner
Art Unit 2667

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TECHNOLOGY CENTER 2667

9/29/05